

REMARKS

As a result of the foregoing amendment, the specification has been amended to correct typographical errors therein. The claims have been amended to more clearly define the present invention and overcome the formal rejections thereof. In particular, claim 1 has been amended to contain the recitation of claim 7. Claim 7 has been cancelled. Claims 8, 9 and 10 have been amended to correct their dependency. Claim 12 has been amended to correct a typographical error and delete the word "ethers". Claim 15 has been amended to correct it's dependency and claim 19 has been amended to delete the expression "and coatings".

In addition, new claim 23 has been added which includes the recitation of claim 2 and claim 7 with claim 1. It is further noted that inasmuch as new claim 23 includes the recitations of claims 1, 2 and 7 it avoids all of the rejections on the art raised by the Examiner and this claim is clearly allowable.

Accordingly, it is submitted that the above amendment clearly obviates all of the various formal objections and rejections raised by the Examiner.

Reconsideration and withdrawal of the rejection of claims 1, 3, 4, 7 and 10 as being anticipated by the Kreth et al '034 patent are requested. Claims 1 and 7 have now been combined. The examiner asserts that Kreth discloses a method for making a composite titanium dioxide pigment with barium sulfate and further that Kreth teaches the compositional ranges required by the present claim. However, it is submitted that this is a mischaracterization of Kreth with respect to it's relevance to the present claims. More particularly, Kreth is directed to a method for producing a composite TiO_2 pigment. In particular, the pigment is prepared by taking a suspension of metatitanic acid which contains free and combined sulfuric acid and has been purified to remove chromophoric elements. This suspension is neutralized by the addition of calcium oxide or barium oxide in quantities which are stoichiometric with respect to the total sulfate. The calcium sulfate or barium sulfate is precipitated in an intimate mixture with the metatitanic acid and the coprecipitate is separated and dried. Consequently, this particular combination as produced by this method does

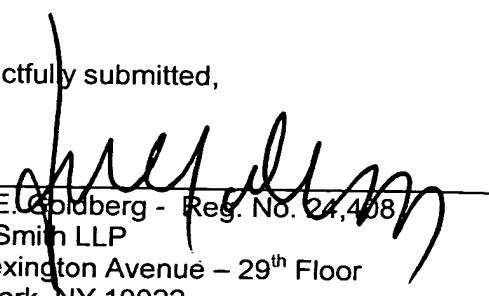
not nearly contain barium sulfate and titanium oxide. Rather, because of the method used, mixture is obtained which constitutes titanium dioxide and barium sulfate obtained by a chemical process resulting in a particular intimate mixture of the two materials having certain particle size ranges. This does not constitute presently claimed which requires only the presence of titanium dioxide and barium sulfate in an amount effective to stabilize and avoid agglomeration of the TiO₂. The '034 patent discloses a relatively large number of materials which can be mixed with the titanium oxide hydrate, for example, calcium oxide, calcium hydroxide, calcium carbonate, barium oxide, barium hydroxide, barium carbonate as well as mixtures thereof. The patent further discloses a rather complicated process for producing the resulting composite. Certainly, there is nothing in this reference which suggests that barium sulfate would have any anti-agglomeration or stabilizing effect on the TiO₂. In addition, the reference requires this specific process disclosed therein to produce the disclosed composite so that specific particle size ranges and intimate mixture of the materials can be obtained. It is submitted that the reference does not anticipate the present invention as set forth in the claims as amended and this rejection should be withdrawn.

Inasmuch as claim 7 was not included in the rejections set forth in paragraph 8 over the Alessandroni patent or the rejection in claim 10 over the Kreth et al patent or the rejection in paragraph 11 over the combination of Kreth et al and Dietz, or the rejection set forth in claim 13 over Kreth taken with Alessandroni, it is clear that these rejections are not applicable in light of the foregoing amendment.

Accordingly, it is submitted that the rejection on the Kreth patent is untenable and should be withdrawn and the remaining rejections are no longer applicable and should be withdrawn.

In view of the foregoing, it is submitted that this application is now in condition for allowance and favorable reconsideration and prompt notice of allowance are earnestly solicited.

Respectfully submitted,

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MARKED UP VERSION

In the specification

At page 5, line 12

Typical additives which may be utilized in the inventive composition include materials, such as, dimethyl polysiloxane, octamethylcyclotetrasiloxane, anionic polyacrylate, polyglycolethers, fumed silica [ethers], petroleum hydrocarbons, acrylic polymers, triethanolamine, bicyclic oxazolidines, 1,2-benzisothiazolin-3-on, sodium hydroxide as well as combinations of these ingredients.

At page 8, line 25

A pH meter was utilized capable of measuring the pH to 0.1 units or better was used. The pH meter was checked with buffered reference solutions having a pH of 7 and a pH of 10 and calibration was carried out if necessary. The electrodes were then introduced into the slurry and the slurry was gently agitated to ensure a thorough wetting and the pH was [red] read to the nearest 0.1.

In the claims

1. (amended) A pigment composition comprising TiO₂ and a TiO₂ stabilizing and anti-agglomeration effective amount of barium sulfate wherein the amount of TiO₂ is in the range from about 65.0 to 95.0 per cent by weight and the amount of barium sulfate is in the range from about 5.0 to 35.0 percent by weight, all weights being based on the weight of the total solids content of the composition.

8. (amended) The pigment composition of claim [7] 1 wherein the amount of TiO₂ is in the range from about 70.0 to 76.0 per cent by weight and the amount of barium sulfate is in the range from about 30.0 to 24.0 percent by weight, all weights being based on the weight of the total solids content of the composition.

9. (amended) The pigment composition of claim [7] 1 which comprises about 74.5 to 75.5% by weight TiO₂, and from about 24.5 to 25.5 % by weight blanc fix, all percentages being based on the total solid contents of the composition.

10. (amended) The pigment composition of claim [7] 1 wherein the composition further comprises an additive selected from the group consisting of defoamers, dispersants, biocides, pH adjustment agents and combinations thereof.

12. (amended) The pigment composition of claim 11 wherein the additive is selected from the group consisting of dimethyl polysiloxane, octamethylcyclotetresiloxane, anionic polyacrylate, polyglycoethers, fumed silica [ethers], petroleum hydrocarbons, acrylic polymers, triethanolamine, bicyclic oxazolidines, 1,2-benzisothiazolin-3-on, sodium hydroxide and combinations thereof.

15. (amended) The composition of claim [13] 14 having a pH of from about 7.0 to 10.0, a maximum 325 sieve residue in parts per million of 50, and a Brookfield viscosity of about 200 to 800 as measured with a #4 spindle at 100rpm at ambient temperature.

19. (amended) The method of claim 16 wherein the substrate is selected from the group consisting of paper[,] and plastic[, and coatings].